CENTRAL AND SOUTHERN FLORIDA PROJECT MODIFIED WATER DELIVERIES TO EVERGLADES NATIONAL PARK, FLORIDA

8.5 SQUARE MILE AREA

SUPPLEMENT TO THE FINAL ENVIRONMENTAL IMPACT STATEMENT

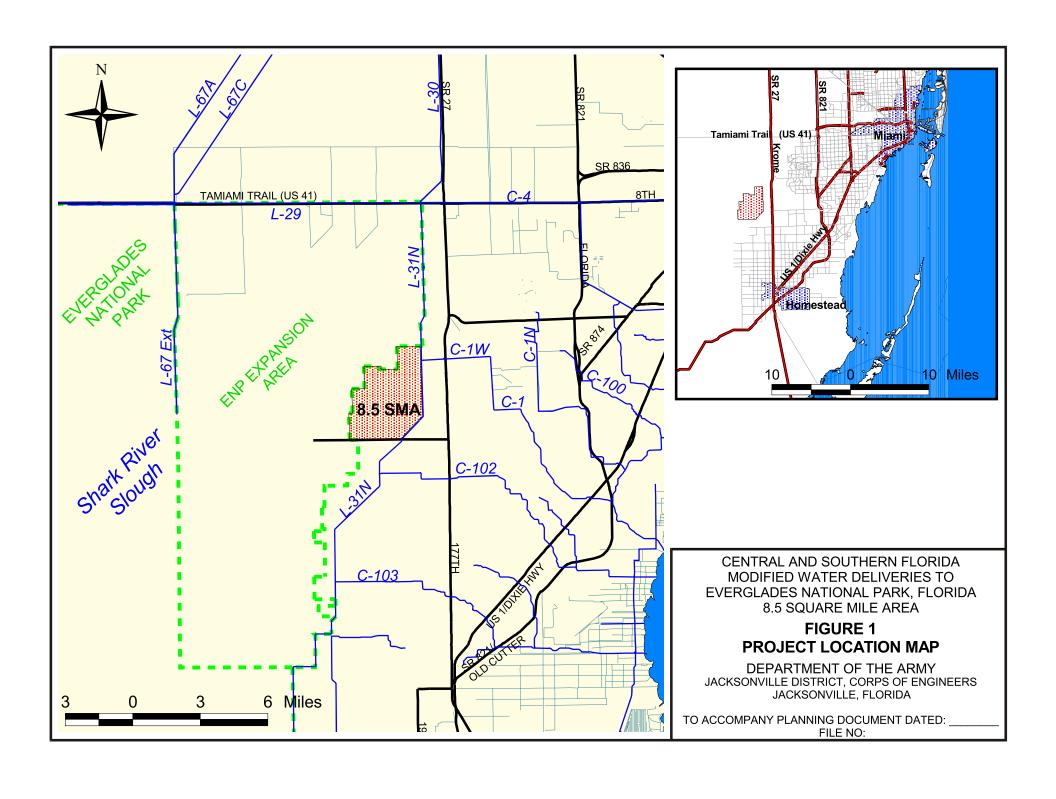
FIGURES

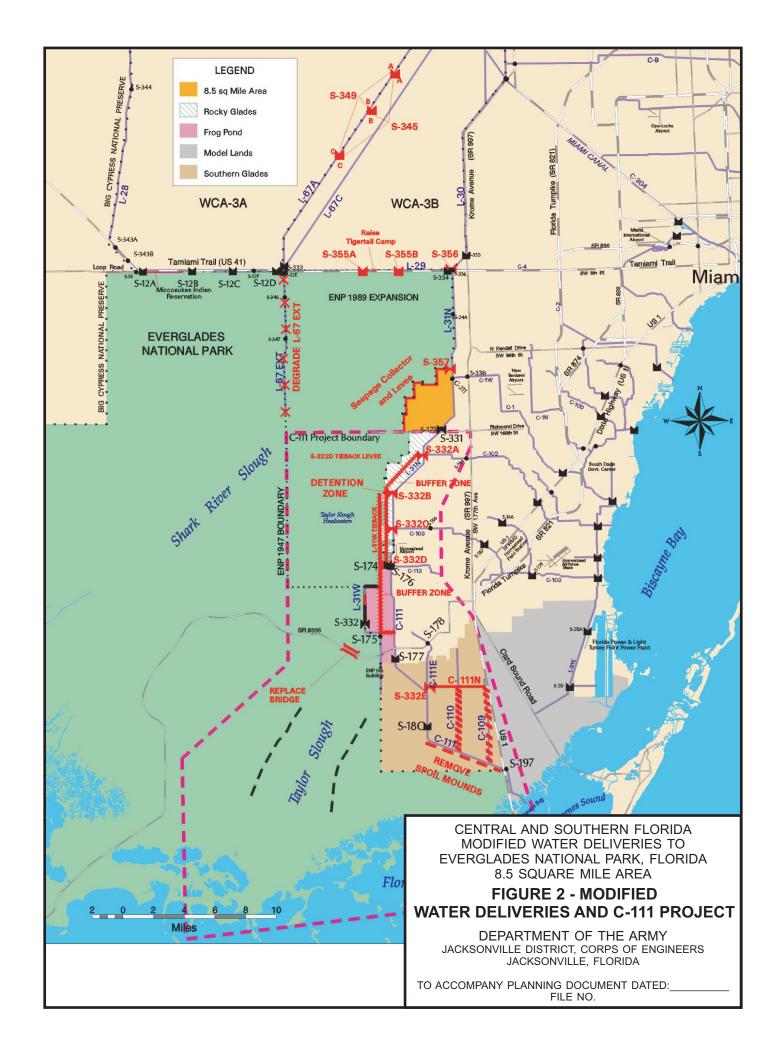
DEPARTMENT OF THE ARMY JACKSONVILLE DISTRICT, CORPS OF ENGINEERS JACKSONVILLE, FLORIDA

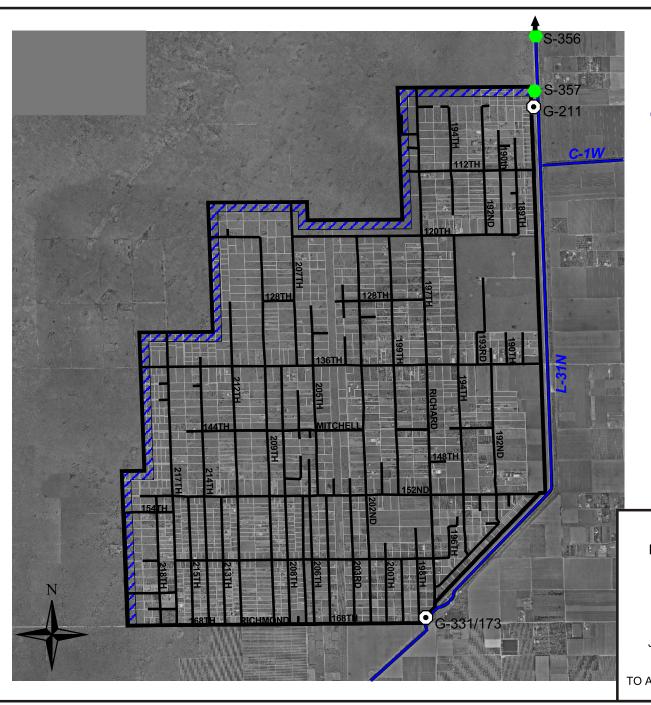
July 2000











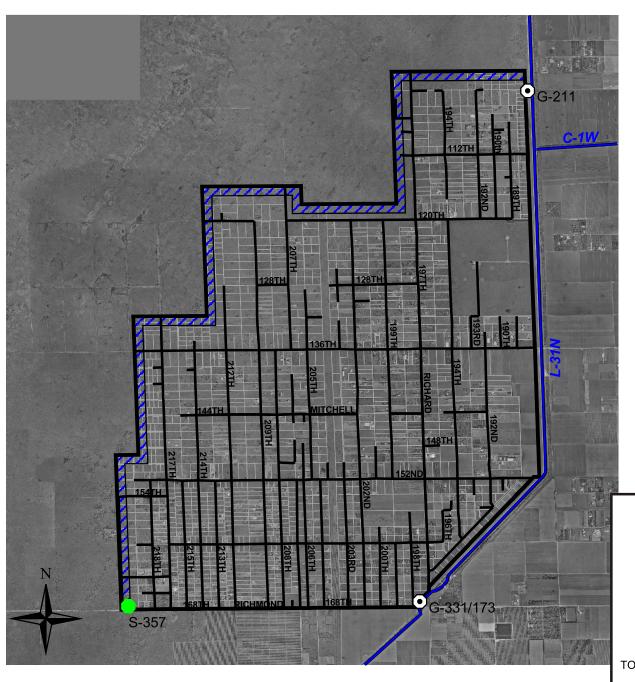
Levees and Seepage Canal
Proposed Structures

Existing StructuresCanals

CENTRAL AND SOUTHERN FLORIDA MODIFIED WATER DELIVERIES TO EVERGLADES NATIONAL PARK, FLORIDA 8.5 SQUARE MILE AREA

FIGURE 3A - ALTERNATIVE 1 - AUTHORIZED GDM PLAN

DEPARTMENT OF THE ARMY JACKSONVILLE DISTRICT, CORPS OF ENGINEERS JACKSONVILLE, FLORIDA

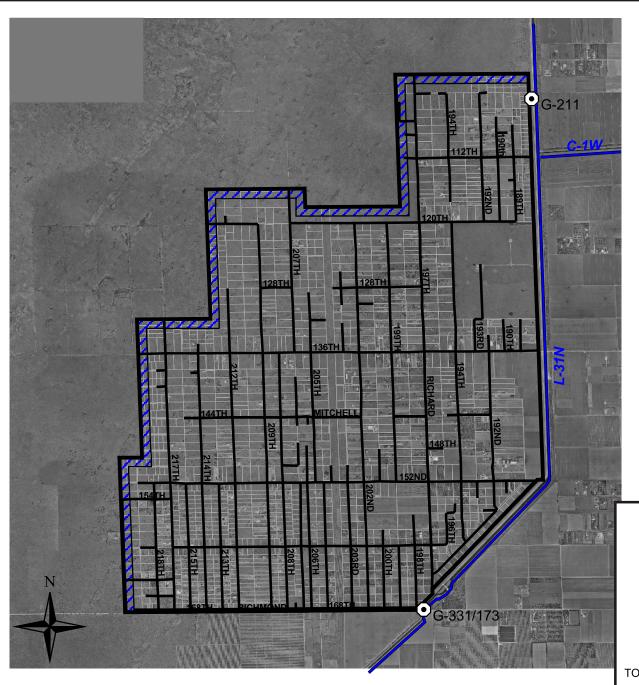


Levees and Seepage CanalProposed StructureExisting StructuresCanals

CENTRAL AND SOUTHERN FLORIDA MODIFIED WATER DELIVERIES TO EVERGLADES NATIONAL PARK, FLORIDA 8.5 SQUARE MILE AREA

FIGURE 3B - ALTERNATIVE 2B - MODIFIED GDM PLAN

DEPARTMENT OF THE ARMY JACKSONVILLE DISTRICT, CORPS OF ENGINEERS JACKSONVILLE, FLORIDA



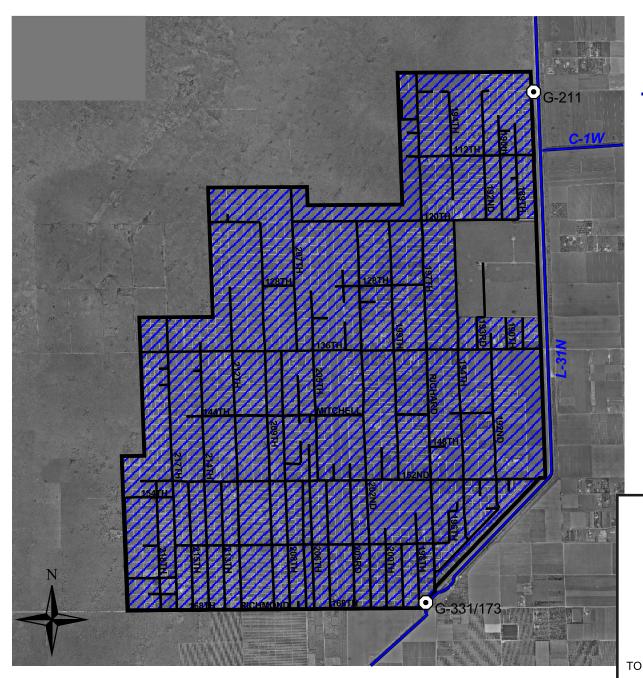
Levees and Seepage Barrier

Existing StructuresCanals

CENTRAL AND SOUTHERN FLORIDA MODIFIED WATER DELIVERIES TO EVERGLADES NATIONAL PARK, FLORIDA 8.5 SQUARE MILE AREA

FIGURE 3C - ALTERNATIVE 3 - DEEP SEEPAGE BARRIER PLAN

DEPARTMENT OF THE ARMY JACKSONVILLE DISTRICT, CORPS OF ENGINEERS JACKSONVILLE, FLORIDA



Landowner has choice of Flowage Easement, Buy-Out, or Life Estates

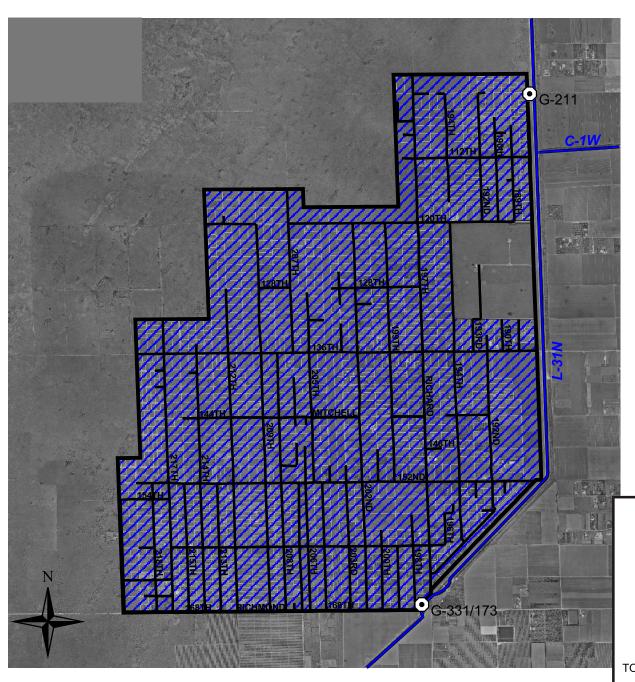
Existing Structures

Canals

CENTRAL AND SOUTHERN FLORIDA MODIFIED WATER DELIVERIES TO EVERGLADES NATIONAL PARK, FLORIDA 8.5 SQUARE MILE AREA FIGURE 3D - ALTERNATIVE 4 -

FIGURE 3D - ALTERNATIVE 4 -LANDOWNER'S CHOICE LAND ACQUISITION PLAN

DEPARTMENT OF THE ARMY JACKSONVILLE DISTRICT, CORPS OF ENGINEERS JACKSONVILLE, FLORIDA

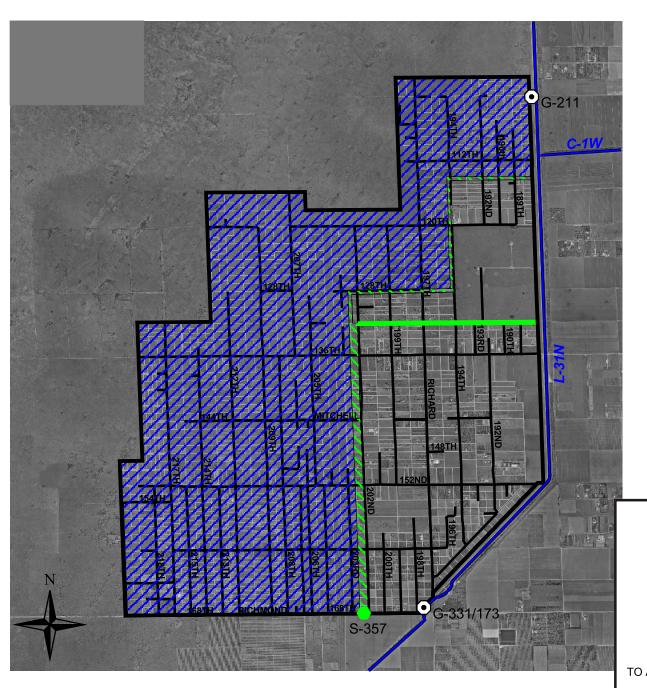


Total Buy-Out AreaExisting StructuresCanals

CENTRAL AND SOUTHERN FLORIDA MODIFIED WATER DELIVERIES TO EVERGLADES NATIONAL PARK, FLORIDA 8.5 SQUARE MILE AREA

FIGURE 3E - ALTERNATIVE 5 - TOTAL BUY-OUT PLAN

DEPARTMENT OF THE ARMY JACKSONVILLE DISTRICT, CORPS OF ENGINEERS JACKSONVILLE, FLORIDA



Levees and Seepage Canal

Buy-Out Area

Proposed Structure

Existing Structures

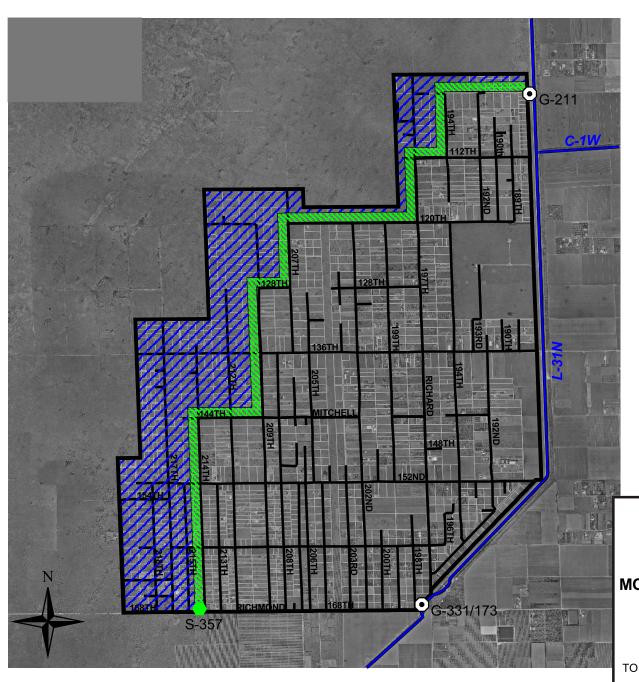
— Canals

Proposed Canal

CENTRAL AND SOUTHERN FLORIDA MODIFIED WATER DELIVERIES TO EVERGLADES NATIONAL PARK, FLORIDA 8.5 SQUARE MILE AREA

FIGURE 3F - ALTERNATIVE 6B - WESTERN PORTION OF 8.5 SMA AS BUFFER

DEPARTMENT OF THE ARMY JACKSONVILLE DISTRICT, CORPS OF ENGINEERS JACKSONVILLE, FLORIDA



Levees and Seepage Canal

Buy-Out Area

Proposed Structure

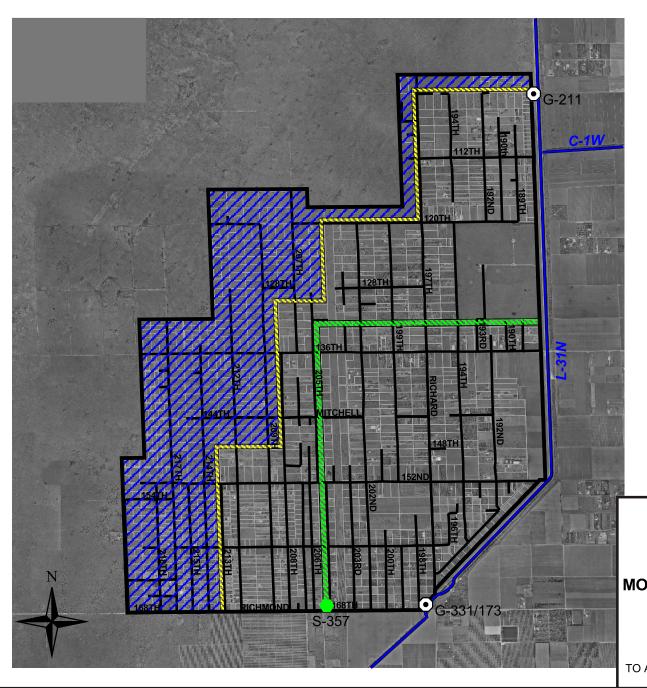
Existing Structures

Canals

CENTRAL AND SOUTHERN FLORIDA MODIFIED WATER DELIVERIES TO EVERGLADES NATIONAL PARK, FLORIDA 8 5 SOUARE MILE AREA

8.5 SQUARE MILE AREA FIGURE 3G - ALTERNATIVE 6C -MODIFIED WESTERN PORTION OF 8.5 SMA AS BUFFER (SOR BOUNDARY)

AS BUFFER (SOR BOUNDARY)
DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA



Canal & Internal Levees

Buy-Out Area

Perimeter Levee

Proposed Structure

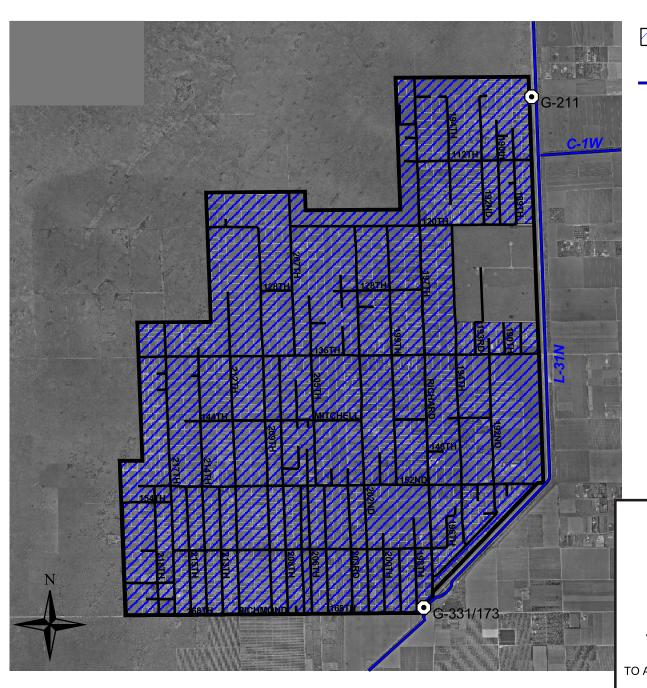
Existing Structures

Canals

CENTRAL AND SOUTHERN FLORIDA MODIFIED WATER DELIVERIES TO EVERGLADES NATIONAL PARK, FLORIDA 8.5 SQUARE MILE AREA

FIGURE 3H - ALTERNATIVE 6D - MODIFIED WESTERN PORTION OF 8.5 SMA AS BUFFER

DEPARTMENT OF THE ARMY JACKSONVILLE DISTRICT, CORPS OF ENGINEERS JACKSONVILLE, FLORIDA

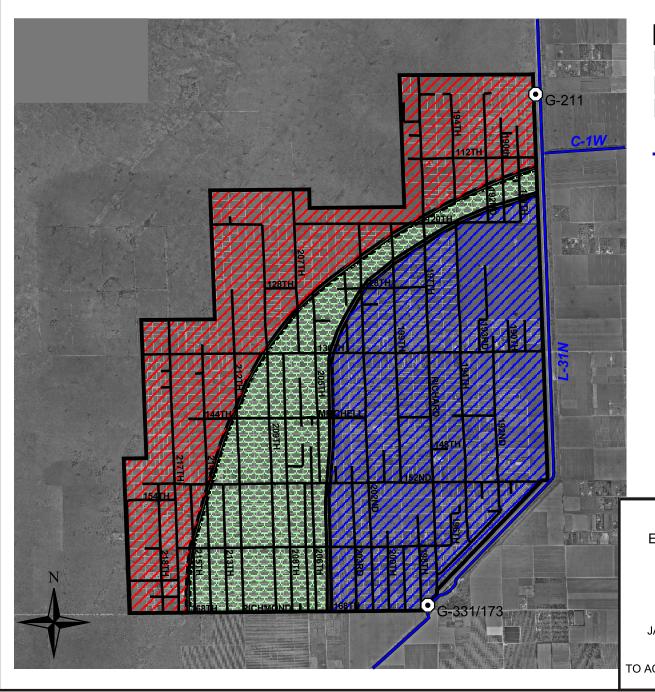


Area of Raised - Flood Free RoadsExisting StructuresCanals

CENTRAL AND SOUTHERN FLORIDA MODIFIED WATER DELIVERIES TO EVERGLADES NATIONAL PARK, FLORIDA 8.5 SQUARE MILE AREA

FIGURE 3I - ALTERNATIVE 7 - RAISE ALL ROADS PLAN

DEPARTMENT OF THE ARMY JACKSONVILLE DISTRICT, CORPS OF ENGINEERS JACKSONVILLE, FLORIDA



Levees

Buy-Out Area

Floodway/Swale

Flood Mitigation

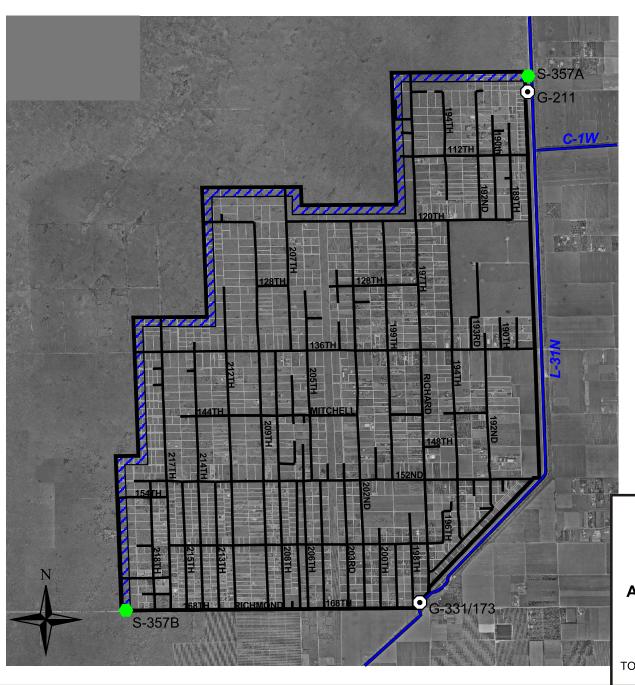
Existing Structures

Canals

CENTRAL AND SOUTHERN FLORIDA MODIFIED WATER DELIVERIES TO EVERGLADES NATIONAL PARK, FLORIDA 8.5 SQUARE MILE AREA

8.5 SQUARE MILE AREA FIGURE 3J - ALTERNATIVE 8A WESTERN PORTION OF 8.5 SMA AS FLOW-WAY

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

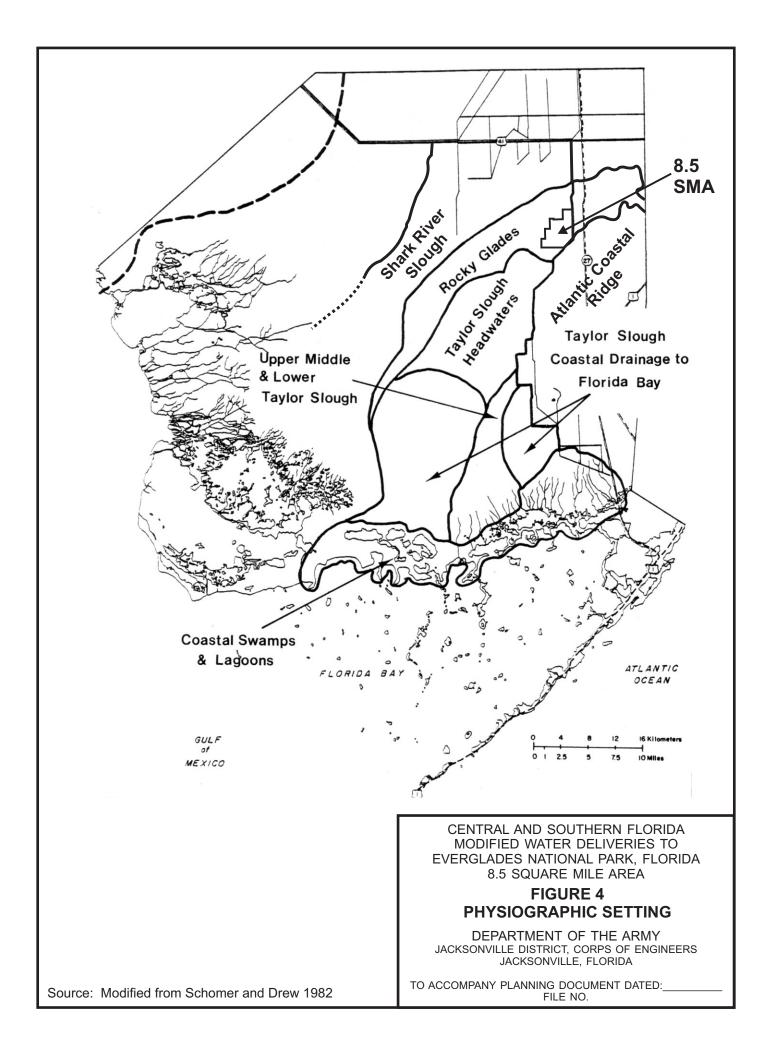


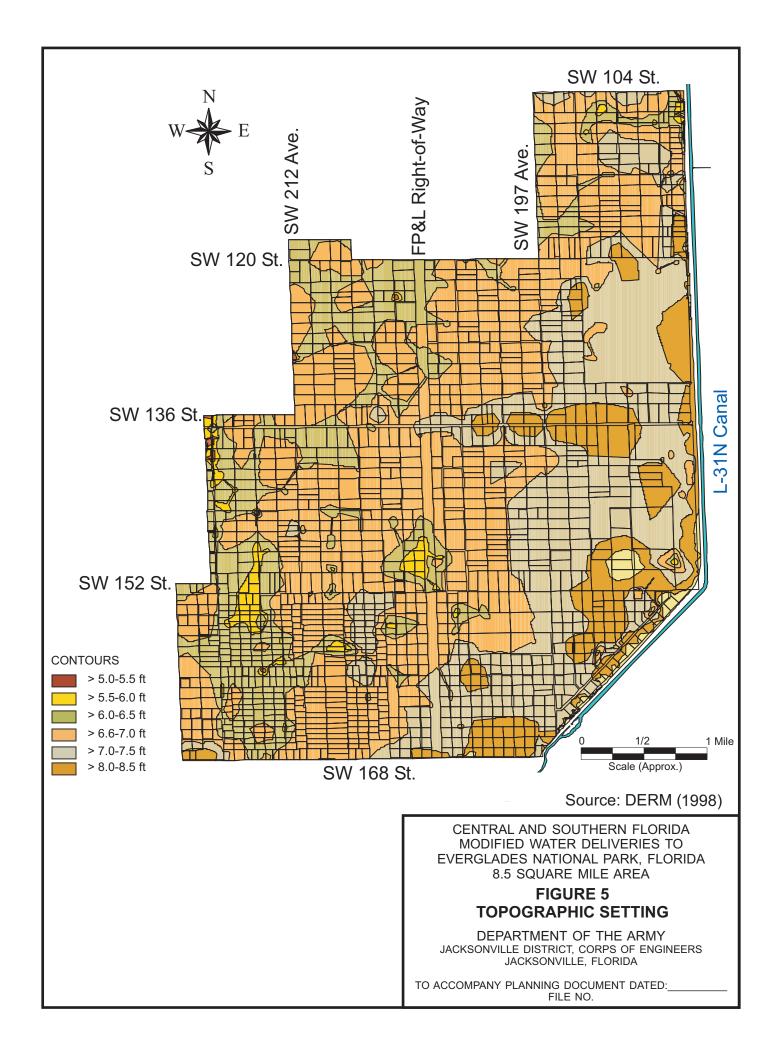
Levees and Seepage CanalProposed StructuresExisting StructuresCanals

CENTRAL AND SOUTHERN FLORIDA MODIFIED WATER DELIVERIES TO EVERGLADES NATIONAL PARK, FLORIDA 8.5 SQUARE MILE AREA

FIGURE 3K - ALTERNATIVE 9 ADAPTIVE REFINEMENT OF GDM PLAN

DEPARTMENT OF THE ARMY JACKSONVILLE DISTRICT, CORPS OF ENGINEERS JACKSONVILLE, FLORIDA





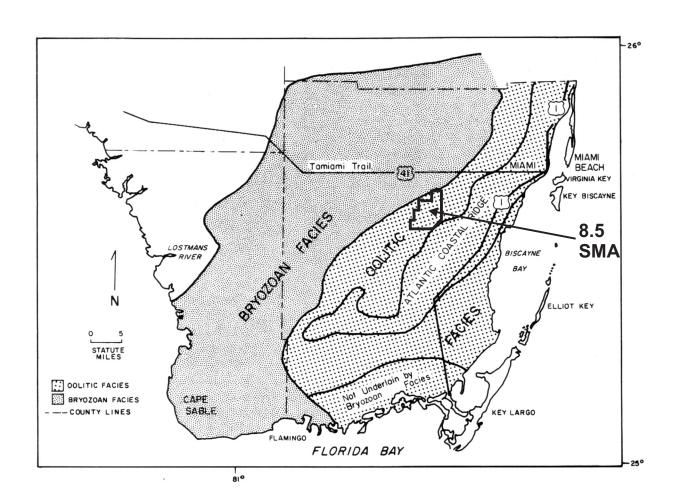
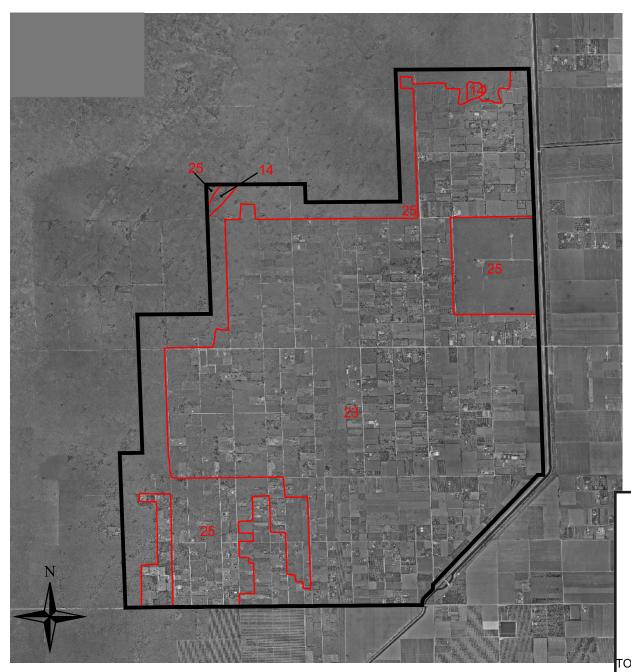


FIGURE 6 - DISTRIBUTION OF THE MIAMI LIMESTONE FORMATION

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

TO ACCOMPANY PLANNING DOCUMENT DATED:_FILE NO.

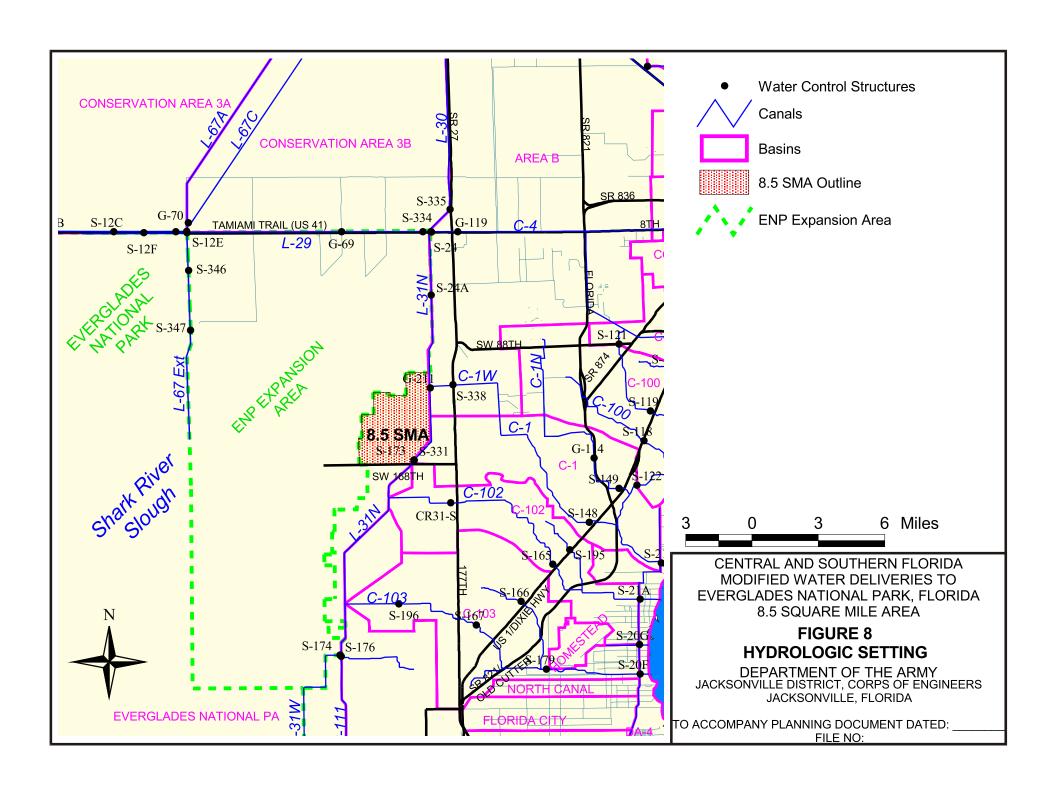
(Adapted from Schomer and Drew 1982)

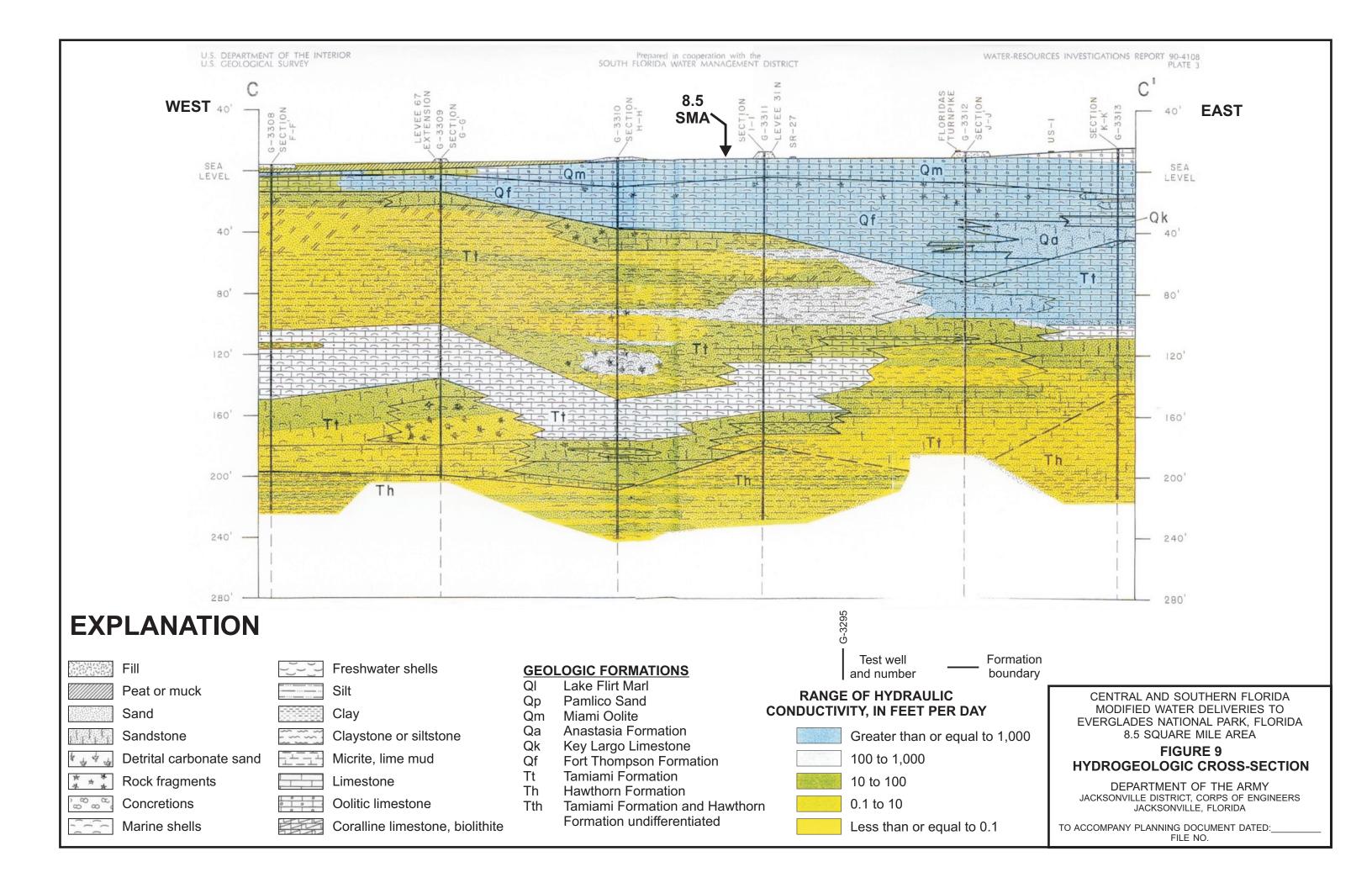


- 14 Dania muck, depressional
- 23 Chekika very gravelly loam
- 25 Biscayne-Rock outcrop complex

FIGURE 7 SOILS MAP

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA





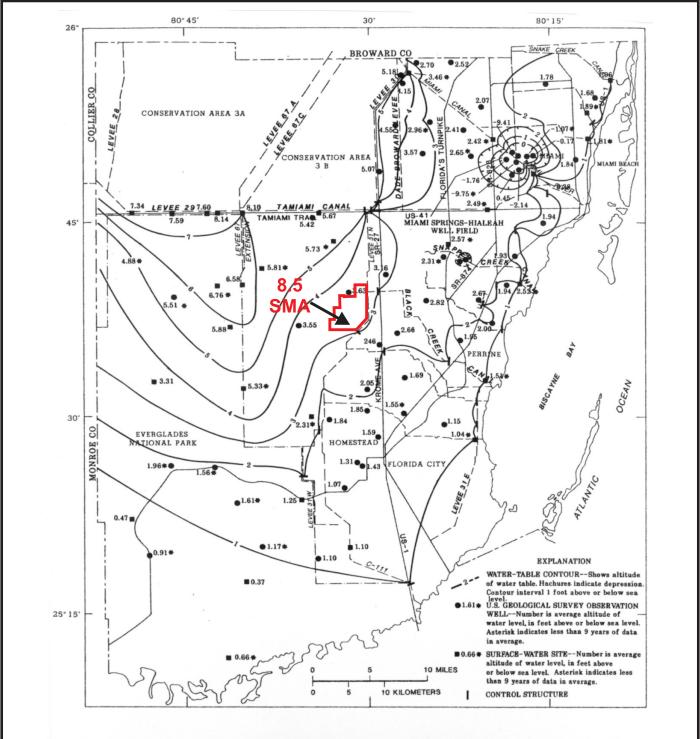


Figure 19. Average configuration of the water table in Dade County in April based on the period 1974-82.

FIGURE 10 AVERAGE DRY SEASON WATER TABLE

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

TO ACCOMPANY PLANNING DOCUMENT DATED:_FILE NO.

Source: Fish and Stewart, 1991

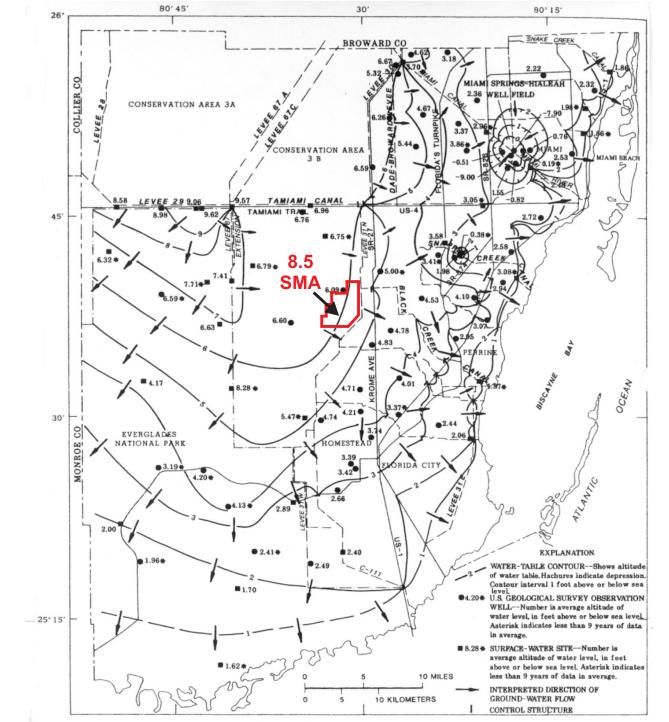


Figure 18. Average configuration of the water table in Dade County in September and interpreted directions of ground-water flow based on the period 1974-82.

FIGURE 11 AVERAGE WET SEASON WATER TABLE

DEPARTMENT OF THE ARMY

JACKSONVILLE DISTRICT, CORPS OF ENGINEERS

JACKSONVILLE, FLORIDA

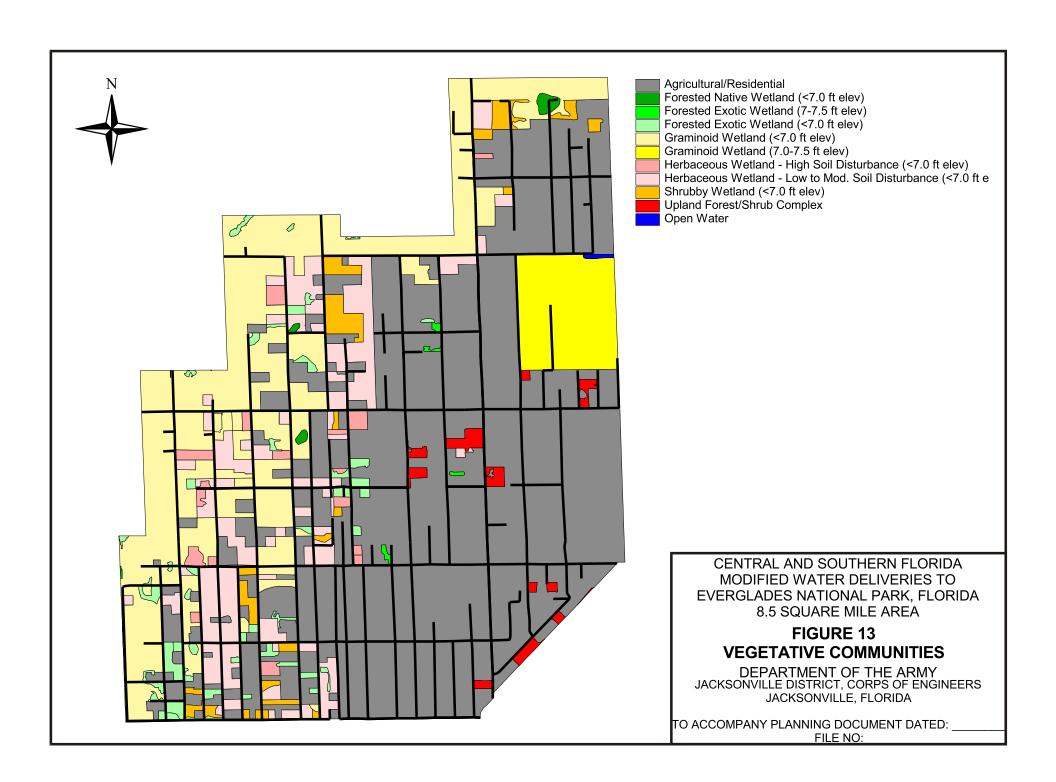
TO ACCOMPANY PLANNING DOCUMENT DATED:_FILE NO.

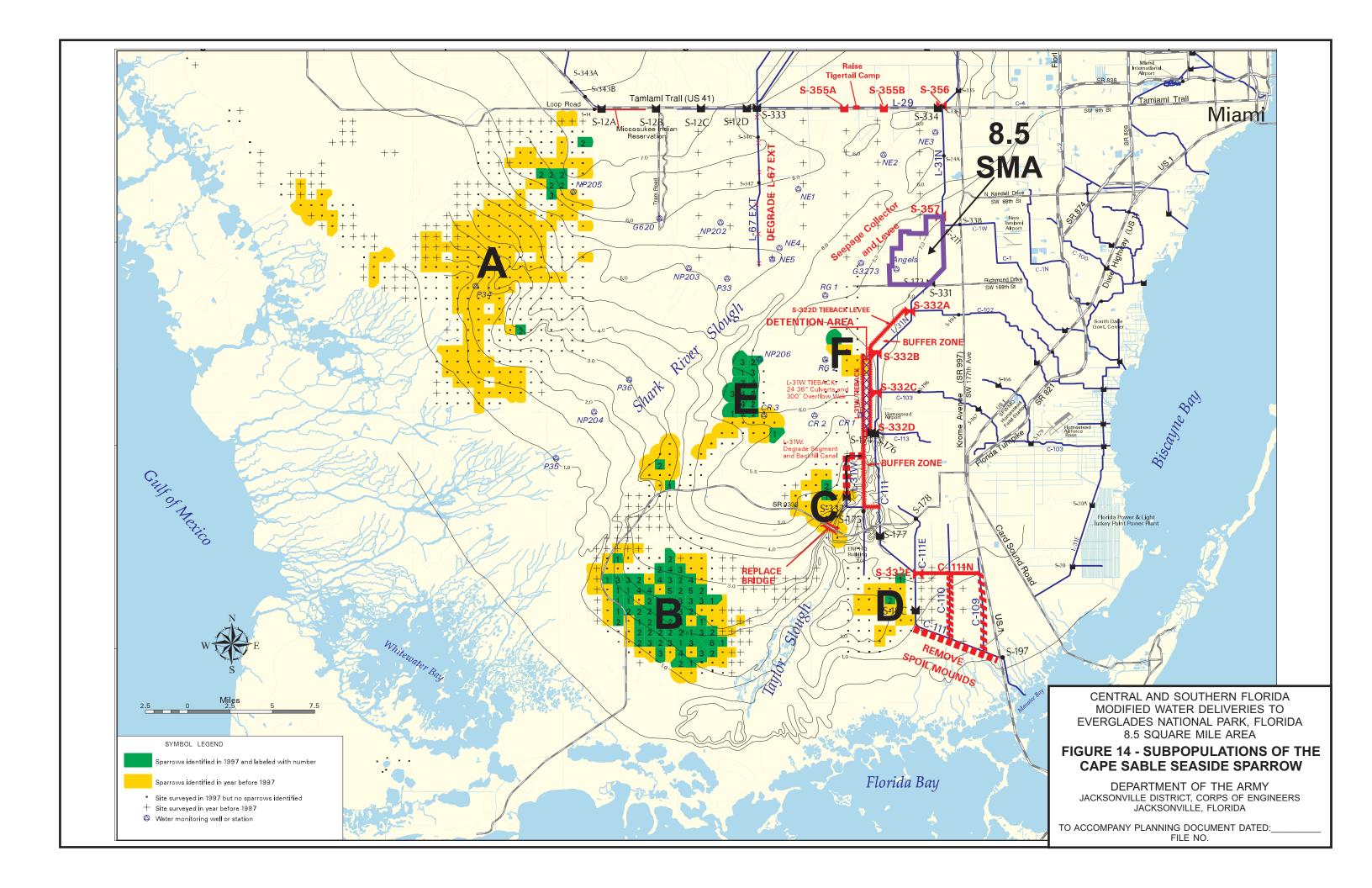
Source: Fish and Stewart, 1991

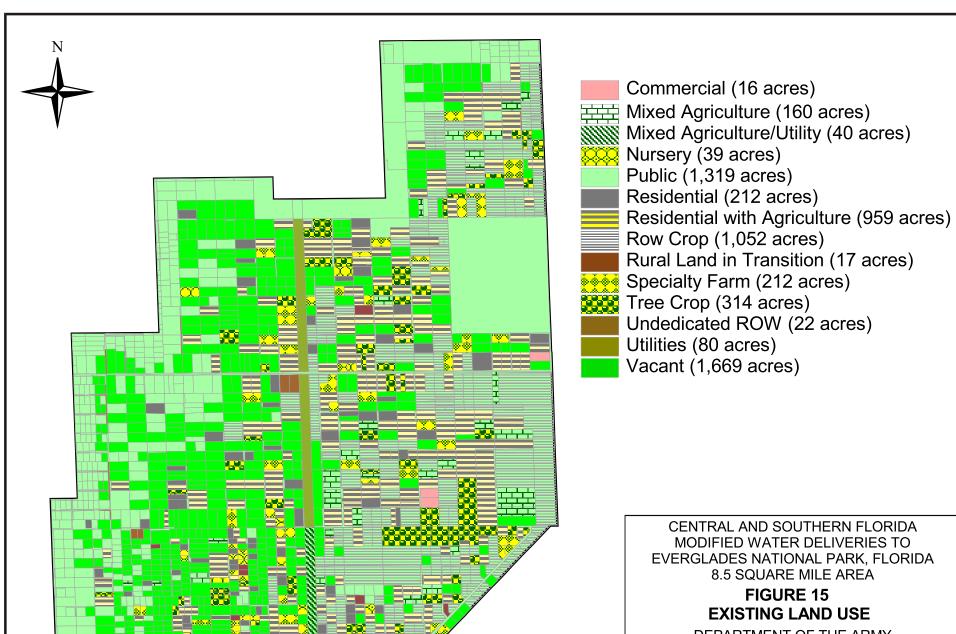


FIGURE 12 - SURFACE (STANDING) WATER SAMPLING SITES

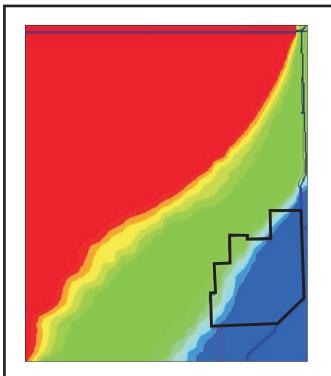
DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA



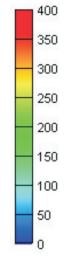


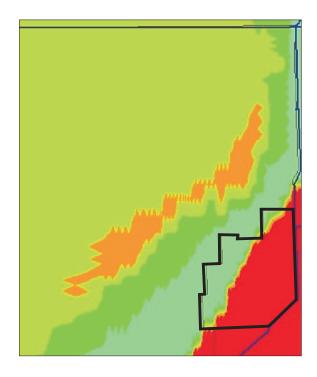


DEPARTMENT OF THE ARMY JACKSONVILLE DISTRICT, CORPS OF ENGINEERS JACKSONVILLE, FLORIDA









Peat-Forming: Depth > 2', Hydroperiod > 180 days

Peat-Forming: -1' < Depth <+2', Hydroperiod > 180 days

Marl-Forming: -1' < Depth <+2', 30 < Hydroperiod < 180 days

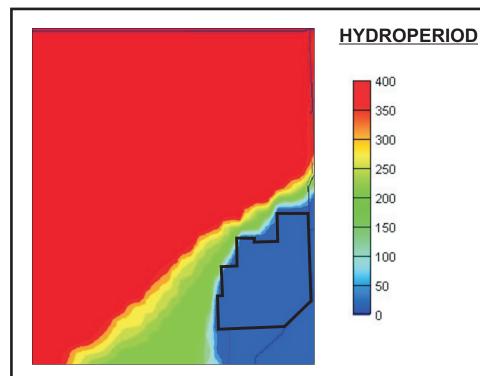
Upland

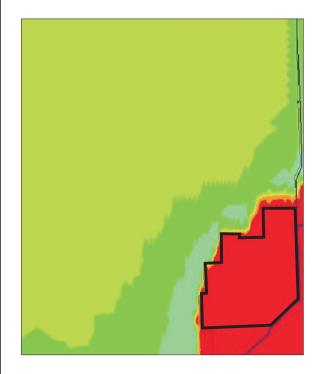
NOTE: Wetlands are defined by hydrology only.

CENTRAL AND SOUTHERN FLORIDA MODIFIED WATER DELIVERIES TO EVERGLADES NATIONAL PARK, FLORIDA 8.5 SQUARE MILE AREA

FIGURE 16 - SIMULATED WETLAND HYDRO-PERIODS AND SUBSTRATE CONDITIONS -EXISTING CONDITIONS

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA





Peat-Forming: Depth > 2', Hydroperiod > 180 days

Peat-Forming: -1' < Depth <+2', Hydroperiod > 180 days

Marl-Forming: -1' < Depth <+2', 30 < Hydroperiod < 180 days

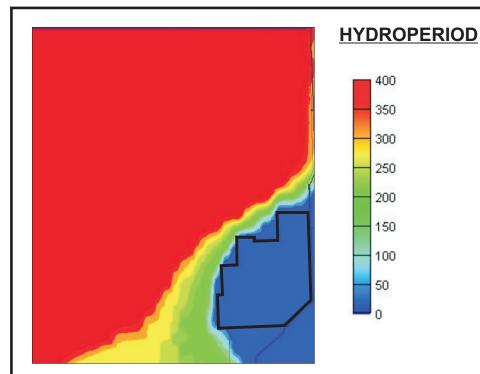
Upland

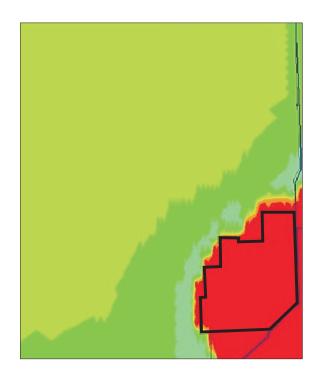
NOTE: Wetlands are defined by hydrology only.

CENTRAL AND SOUTHERN FLORIDA MODIFIED WATER DELIVERIES TO EVERGLADES NATIONAL PARK, FLORIDA 8.5 SQUARE MILE AREA

FIGURE 17 - SIMULATED WETLAND HYDRO-PERIODS AND SUBSTRATE CONDITIONS -ALTERNATIVE 1

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA





Peat-Forming: Depth > 2', Hydroperiod > 180 days

Peat-Forming: -1' < Depth <+2', Hydroperiod > 180 days

Marl-Forming: -1' < Depth <+2', 30 < Hydroperiod < 180 days

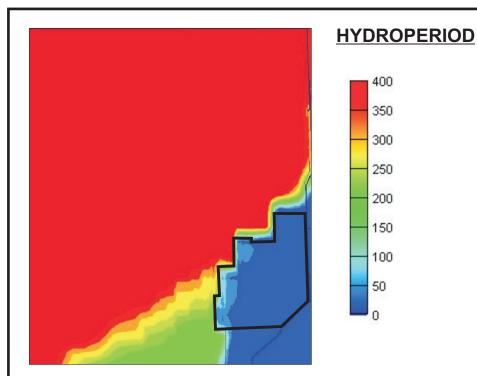
Upland

NOTE: Wetlands are defined by hydrology only.

CENTRAL AND SOUTHERN FLORIDA MODIFIED WATER DELIVERIES TO EVERGLADES NATIONAL PARK, FLORIDA 8.5 SQUARE MILE AREA

FIGURE 18 - SIMULATED WETLAND HYDRO-PERIODS AND SUBSTRATE CONDITIONS -ALTERNATIVES 2B & 9

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA







Peat-Forming: Depth > 2', Hydroperiod > 180 days

Peat-Forming: -1' < Depth <+2', Hydroperiod > 180 days

Marl-Forming: -1' < Depth <+2', 30 < Hydroperiod < 180 days

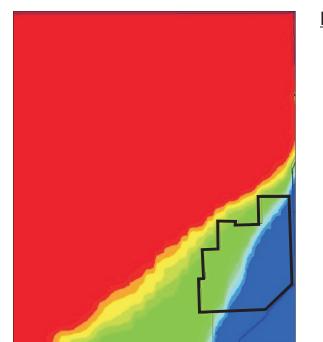
Upland

NOTE: Wetlands are defined by hydrology only.

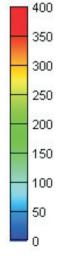
CENTRAL AND SOUTHERN FLORIDA MODIFIED WATER DELIVERIES TO EVERGLADES NATIONAL PARK, FLORIDA 8.5 SQUARE MILE AREA

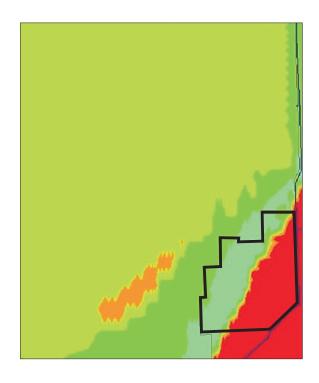
FIGURE 19 - SIMULATED WETLAND HYDRO-PERIODS AND SUBSTRATE CONDITIONS -ALTERNATIVE 3

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA









Peat-Forming: Depth > 2', Hydroperiod > 180 days

Peat-Forming: -1' < Depth <+2', Hydroperiod > 180 days

Marl-Forming: -1' < Depth <+2', 30 < Hydroperiod < 180 days

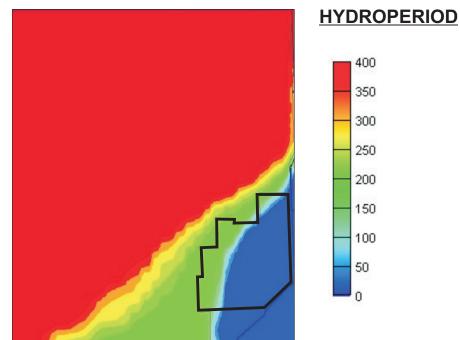
Upland

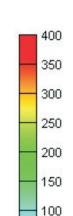
NOTE: Wetlands are defined by hydrology only.

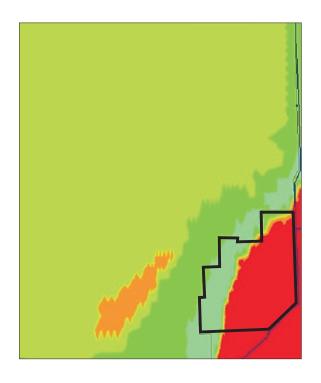
CENTRAL AND SOUTHERN FLORIDA MODIFIED WATER DELIVERIES TO EVERGLADES NATIONAL PARK, FLORIDA 8.5 SQUARE MILE AREA

FIGURE 20 - SIMULATED WETLAND HYDRO-PERIODS AND SUBSTRATE CONDITIONS -ALTERNATIVES 4, 5, & 7

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA







50

Peat-Forming: Depth > 2', Hydroperiod > 180 days

Peat-Forming: -1' < Depth <+2', Hydroperiod > 180 days

Marl-Forming: -1' < Depth <+2', 30 < Hydroperiod < 180 days

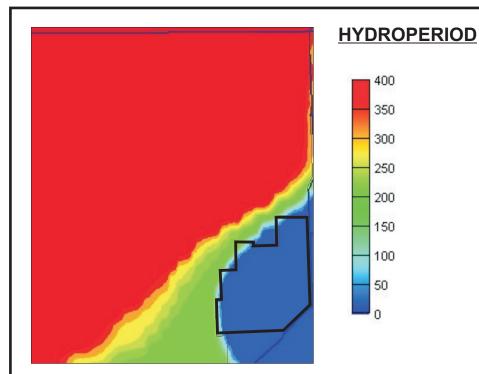
Upland

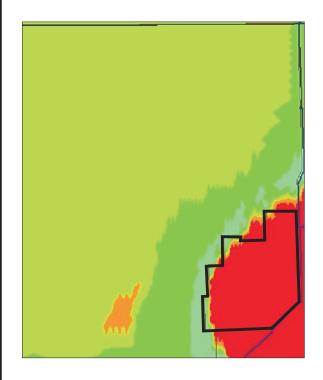
NOTE: Wetlands are defined by hydrology only.

CENTRAL AND SOUTHERN FLORIDA MODIFIED WATER DELIVERIES TO EVERGLADES NATIONAL PARK, FLORIDA 8.5 SQUARE MILE AREA

FIGURE 21 - SIMULATED WETLAND HYDRO-PERIODS AND SUBSTRATE CONDITIONS -**ALTERNATIVE 6B**

DEPARTMENT OF THE ARMY JACKSONVILLE DISTRICT, CORPS OF ENGINEERS JACKSONVILLE, FLORIDA





Peat-Forming: Depth > 2', Hydroperiod > 180 days

Peat-Forming: -1' < Depth <+2', Hydroperiod > 180 days

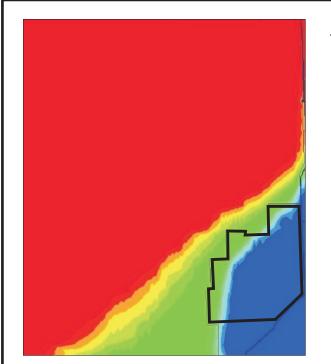
Marl-Forming: -1' < Depth <+2', 30 < Hydroperiod < 180 days

Upland

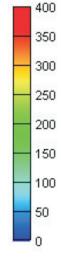
CENTRAL AND SOUTHERN FLORIDA MODIFIED WATER DELIVERIES TO EVERGLADES NATIONAL PARK, FLORIDA 8.5 SQUARE MILE AREA

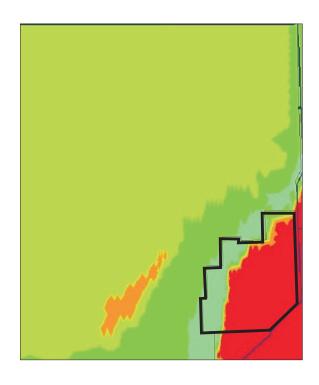
FIGURE 22 - SIMULATED WETLAND HYDRO-PERIODS AND SUBSTRATE CONDITIONS -ALTERNATIVE 6C

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA









Peat-Forming: Depth > 2', Hydroperiod > 180 days

Peat-Forming: -1' < Depth <+2', Hydroperiod > 180 days

Marl-Forming: -1' < Depth <+2', 30 < Hydroperiod < 180 days

Upland

NOTE: Wetlands are defined by hydrology only.

CENTRAL AND SOUTHERN FLORIDA MODIFIED WATER DELIVERIES TO EVERGLADES NATIONAL PARK, FLORIDA 8.5 SQUARE MILE AREA

FIGURE 23 - SIMULATED WETLAND HYDRO-PERIODS AND SUBSTRATE CONDITIONS -ALTERNATIVE 6D

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

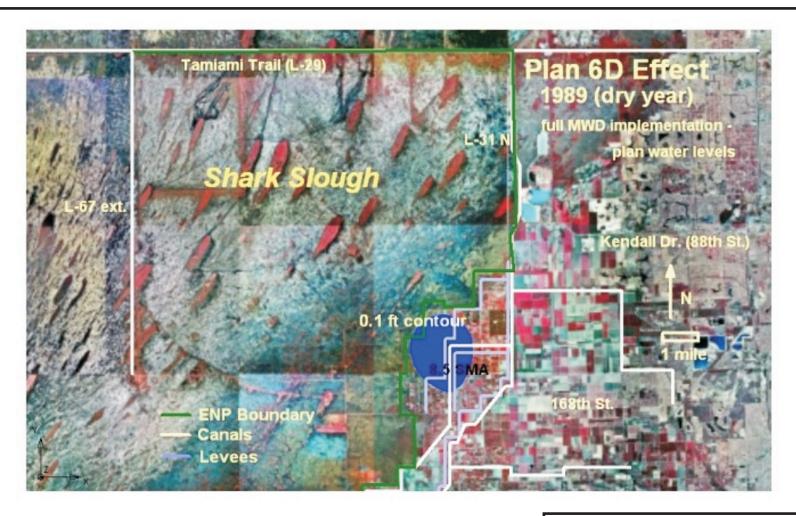
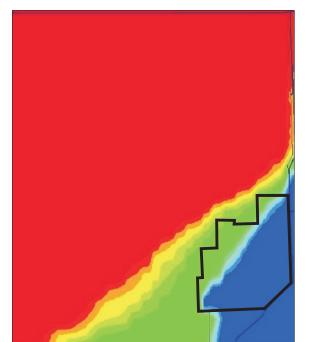
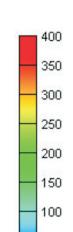


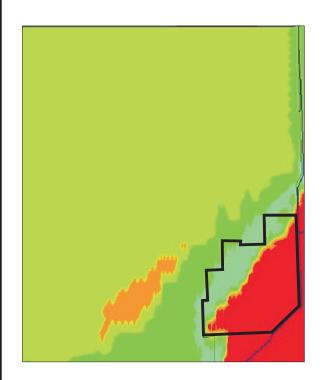
FIGURE 24 - WATER LEVEL EFFECT OF ALTERNATIVE 6D RELATIVE TO FULL MWD IMPLEMENTATION

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA





HYDROPERIOD



WETLANDS

50

Peat-Forming: Depth > 2', Hydroperiod > 180 days

Peat-Forming: -1' < Depth <+2', Hydroperiod > 180 days

Marl-Forming: -1' < Depth <+2', 30 < Hydroperiod < 180 days

Upland

NOTE: Wetlands are defined by hydrology only.

CENTRAL AND SOUTHERN FLORIDA MODIFIED WATER DELIVERIES TO EVERGLADES NATIONAL PARK, FLORIDA 8.5 SQUARE MILE AREA

FIGURE 25 - SIMULATED WETLAND HYDRO-PERIODS AND SUBSTRATE CONDITIONS -ALTERNATIVE 8A

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA